ARTN ASSOCIATES
Modern Construction Solutions
059, MIG-A Sector, Opp. Railwheel Factory,
lahanka New Town, Bangalore - 64
: 8048505503 | Email : aartnassociates@gmail.com

AARTNASSOCIATES/PMC/15FIN/2022-23

Date: 13-06-2022

To,
The Executive Engineer,
Yelahanka Division
Bangalore.

"FREQUENCY AND QUALITY REPORT"

Dear Sir,

Subject: Regarding Quality Report for the below mentioned work.

Name of Work: Augmentation of water supply throught borewell, network of pipeline and ground water recharge facilities in various layout of Harohalli,Nagenahalli, Kenchenhalli,Ananthapura,Doddabettahalli and Chikkabettahalli village limits in Ward No 02,03 of Yelahanka Division(PACKAGE NO-16)

Item No	Description of work	Unit	Qty	No of Samples Tested	Frequency	Results Standards
1	Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone	Cum	1165.41	3	Per 400 cum	Meets Morth V Revision Standards
2	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to	Cum	1523.84	8	Per 200 cum	Meets Morth V Revision Standards
3	KSRRB M600-1.Providing and Constructing dry lean cement concrete mix CC 1:5:10 base with OPC 25mm and	Cum	443.00	10	Per 50 cum	Meets Morth V Revision Standards
4	Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30 over a prepared base with	Cum	443.00	10	Per 50 cum	Meets Morth V Revision Standards

With respect to the above subject & name of the work, we have inspected the work and the Quantity and Quality of above mentioned items of the work was found to be completed satisfactorily for the 1st and Final bill. The all the samples satisfies the standards requirements as per MORTH V Revision 2013.

Thanking you,

With Regards,

For AARTN Associates

AE-02

Asst. Executive Engineer
Yelahanka Sub. Division
(BBMP Ynk. Zn)
Yelahanka, Bangalore

RTN ASSOCIATES
Modern Construction Solutions
9, MIG-A Sector, Opp. Railwheel Factory,
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: 8048505503 | Email : aartnassociates@gmail.com

AARTNASSOCIATES/PMC/15FIN/2022-23

Date: 13-06-2022

To,
The Executive Engineer,
Yelahanka Division,
Bangalore.

"PMC CERTIFICATE AND INSPECTION REPORT"

Dear Sir,

Subject: Regarding Inspection Report for the below mentioned work.

Name of Work: Augmentation of water supply throught borewell, network of pipeline and ground water recharge facilities in various layout of Harohalli,Nagenahalli, Kenchenhalli,Ananthapura,Doddabettahalli and Chikkabettahalli village limits in Ward No 02,03 of Yelahanka Division(PACKAGE NO-16)

Item No	Description of work	Unit	Qty	Remarks
1	Geophysical investigation of site for sinking Borewell for supplying drinking water to the habitation either through the Hand pump, MWS of P.W.S.S by vertical electrical sounding by	Nos	27.00	Work done upto the Billed Quantity and the Quality is Satisfactory
2	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars	m	1350.00	Work done upto the Billed Quantity and the Quality is Satisfactory
3	50-100.00m	m	1350.00	Work done upto the Billed Quantity and the Quality is Satisfactory
4	100-150.00m	m	1500.00	Work done upto the Billed Quantity and the Quality is Satisfactory
5	150-200.0m	m	1500.00	Work done upto the Billed Quantity and the Quality is Satisfactory
6	200-250.00m	m	1500.00	Work done upto the Billed Quantity and the Quality is Satisfactory
7	250-300.00m	m	1500.00	Work done upto the Billed Quantity and the Quality is Satisfactory
8	300-350.00m	m	959.00	Work done upto the Billed Quantity and the Quality is Satisfactory
9	Re Drilling of Borewells	m	300.00	Work done upto the Billed Quantity and the Quality is Satisfactory
10	Supply of ISI mark 175 mm nominal bore medium black ERW casing pipe of 5 mm thick black electric resistance continuous welded mild steel tube material confirming to IS 1387 / 1993 &	m	1648.00	Work done upto the Billed Quantity and the Quality is Satisfactory
11	Providing and fixing in trenches galvanised / mild steel tubes (medium grade) 50mm dia nominal bore with all fittings (earth work in trenches to be measured and paid for separately)	Each	8385.00	Work done upto the Billed Quantity and the Quality is Satisfactory

AARTN ASSOCIATES BANGALORE

Executive Engineer
(Yelahanka Sub. Division
(BBMP Ynk. Zn)
Yelahanka, Bangalore

Item No	Description of work	Unit	Qty	Remarks
12	Providing 250mm dia PVC Pipe	Rmtr	156.00	Work done upto the Billed Quantity and the Quality is Satisfactory
13	Supplying and drawing 3 core flat PVC sheathed submersible pump cable manufactured with electrolytic grade copper with flexible copper with low resistance conductor confirming	Mtr	17627.00	Work done upto the Billed Quantity and the Quality is Satisfactory
14	Texmo, Atalanta, Suguna, CRI KIRLOSKER AND other equipment pumps 15.00 HP/11KW(30 Stage)	Nos	28.00	Work done upto the Billed Quantity and the Quality is Satisfactory
15	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ...	Nos	29.00	Work done upto the Billed Quantity and the Quality is Satisfactory
16	Supplying and Fixing 20"x20"x2.5"polished wood board made up not less than 15mm thick plank with front plank one end providing for olding at other end fixing the same to the valve	Each	29.00	Work done upto the Billed Quantity and the Quality is Satisfactory
17	Supplying of 1.1 KV LT UG cable having aluminium condutor PVC insulated shethed, EXTREDED INNER SHEATHRD galvnised steel,stirp (2CX 10Sqm.mm wire armoured) confirming IS	m	847.00	Work done upto the Billed Quantity and the Quality is Satisfactory
18	Labour charges for laying of 1.1 K.V class UG cable, in existing trench GI Pipe / stoneware pipe /on wall/on poles as required In existing trencg/duct 6 Sqmm to 16 Sqmm)	Mtr	847.00	Work done upto the Billed Quantity and the Quality is Satisfactory
19	Supplying and fixing of procelin fuse channel with e on existing wooden / panel using necessary nuts, bolts and washers , 63 Amps	Each	29.00	Work done upto the Billed Quantity and the Quality is Satisfactory
20	Providing and fixing in position 50mm nominal bore non-return valve horizontal type of approved make including cost of all materials, labour and HOM of equipments with all leads	Nos	29.00	Work done upto the Billed Quantity and the Quality is Satisfactory
21	Supplying and fixing maniature circuit breakers on existing MCB Distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, Energy cross -3 with short circuit	Each	29.00	Work done upto the Billed Quantity and the Quality is Satisfactory
22	KSRB 2-2 : Earthwork excavation by manual means for foundation of buildings, water supply and sanitary lines and electrical conduits etc, either in pits or in trenches 1.5m and	Cum	8661 18	Work done upto the Billed Quantity and the Quality is Satisfactory
23	Providing and filling sand in foundation to required depth for sub soil treatment including watering ramming with all lead and lift complete as per specifications.	Cum	1217.61	Work done upto the Billed Quantity and the Quality is Satisfactory
24	Supplying PVC ring tight pipes conformin to IS 4980 :2000 With latest amendments and conveying to work site rolling and lowering into trenches laying true line level and prefect linking	m	13529.00	Work done upto the Billed Quantity and the Quality is Satisfactory
25	Refilling available earth around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m	Cum	5558.64	Work done upto the Billed Quantity and the Quality is Satisfactory

AARTN ASSOCIATES DAIF BANGALORE

AE-02

ASSt. Executive Engineer
Yelahanka Sub. Division
(BBMP Ynk. Zn)
Yelahanka, Bangalore

J.E.03.

Item No	Description of work	Unit	Qty	Remarks
26	Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a	Cum	1165.41	Work done upto the Billed Quantity and the Quality is Satisfactory
27	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with	Cum	1523.84	Work done upto the Billed Quantity and the Quality is Satisfactory
28	KSRRB M600-1 Providing and Constructing dry lean cement concrete mix CC 1:5:10 base with OPC 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine	Cum	443.00	Work done upto the Billed Quantity and the Quality is Satisfactory
29	Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30 over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46	Cum	443.00	Work done upto the Billed Quantity and the Quality is Satisfactory
30	Supplying fully automatic star-delta starter unit push button type with suitable wires, 3 contactors, one adjustable thermal timer mounted on a common base plate held in steel enclosure	Nos	26.00	Work done upto the Billed Quantity and the Quality is Satisfactory
32	Filling in foundation with granite/trap broken metal 100mm and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour	Cum	32.96	Work done upto the Billed Quantity and the Quality is Satisfactory
33	Filling in foundation with granite/trap broken metal 100mm and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour	Cum	32.96	Work done upto the Billed Quantity and the Quality is Satisfactory
34	Filling in foundation with granite/trap broken metal 100mm and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour	Cum	32.96	Work done upto the Billed Quantity and the Quality is Satisfactory
35	Filling in foundation with granite/trap broken metal 100mm and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour	Cum	32.96	Work done upto the Billed Quantity and the Quality is Satisfactory
36	Filling in foundation with granite/trap broken metal 100mm and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour	Cum	32.96	Work done upto the Billed Quantity and the Quality is Satisfactory
E1	Providing and laying reinforced cement concrete pipe NP2 for culverts including pointing ends, and fixing collars with cement mortar 1:2 including cost of materials, labour, HOM complete as	m	257.50	Work done upto the Billed Quantity and the Quality is Satisfactory
E2	Texmo, Atalanta, Suguna, CRI KIRLOSKER AND other equipment pumps 15.00 HP/11KW(30 Stage)	Unit	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
E3	KSRB13-9 : Providing and fixing to wall, ceiling and floor high density polyethylene pipes 6.00 kgf/sq.cm working pressure of outside diameter raising mains & exposed distribution pipes	m	271.00	Work done upto the Billed Quantity and the Quality is Satisfactory

With respect to the above subject & name of the work, we have inspected the work and the Quantity and Quality of above mentioned items of the work was found to be completed satisfactorily for the 1st and Final bill

Thanking you,

With Regards,

For AARTN Associates

Executive Engineer
Yelahanka Sub Division
(BBMP Ynk. Zn)
Yelahanka, Bangalore

BRUHAT BANGALORE MAHANAGARA PALIKE

Name of Work: Augmentation of water supply throught borewell, network of pipeline and ground water recharge facilities in various layout of Harohalli,Nagenahalli, Kenchenhalli,Ananthapura,Doddabettahalli and Chikkabettahalli village limits in Ward No 02,03 of Yelahanka Division(PACKAGE NO-16)

Sl No	Description of Work	Unit	Executed Qty	Stage of Work	May-22	Jun-22
1	Geophysical investigation of site for sinking Borewell for supplying drinking water to the habitation either through the Hand pump, MWS of P.W.S.S by vertical electrical sounding by adopting Venner or Schlumberger's method, including reconnaissance survey of geological formation, Gerophysical investigation of existing Ground Wate in the vicinity, its quality1.0	Nos	27.00	Completed		
2	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding cost of casing pipes,	m	1350.00	Completed		
3	50-100.00m	m	1350.00	Completed		
4	100-150.00m	m	1500.00	Completed		
5	150-200.0m	m	1500.00	Completed		
6	200-250.00m	m	1500.00	Completed		
7	250-300.00m	m	1500.00	Completed		
8	300-350.00m	m	959.00	Completed		
9	Re Drilling of Borewells	m	300.00	Completed		

AE-02

Asst. Executive Engineer
Yelahanka Sub. Division
(BBMP Ynk. Zn)

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Sl No	Description of Work	Unit	Executed Qty	Stage of Work	May-22	Jun-22
10	Supply of ISI mark 175 mm nominal bore medium black ERW casing pipe of 5 mm thick black electric resistance continuous welded mild steel tube material confirming to IS 1387 / 1993 & manufactured from hot rolled steel skelp / stripes in random length of 4 to 7 mts both ends threaded confirming to IS 554 / 1985, one end fixed with a socket and the other and with a plastic	m	1648.00	Completed		
11	Providing and fixing in trenches galvanised / mild steel tubes (medium grade) 50mm dia nominal bore with all fittings (earth work in trenches to be measured and paid for separately) including cost of all materials, labour charges, HOM and testing complete as per specifications.	Each	8385.00	Completed		
12	Providing 250mm dia PVC Pipe	Rmtr	156.00	Completed		
13	Supplying and drawing 3 core flat PVC sheathed submersible pump cable manufactured with electrolytic grade copper with flexible copper with low resistance conductor confirming to IS:8130-1984 and virgin grade PVC insulation and powder coating extruded PVC sheathed suitable for working voltage upto 1100Volts as per IS-694:1990.	Mtr	17627.00	Completed		
14	Texmo, Atalanta, Suguna, CRI KIRLOSKER AND other equipment pumps 15.00 HP/11KW(30 Stage)	Nos	28.00	Completed		
15	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit – The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check	Nos	29.00	Completed		
16	Supplying and Fixing 20"x20"x2.5"polished wood board made up not less than 15mm thick plank with front plank one end providing for olding at other end fixing the same to the valve using tapered bolts and nuts,	Each	29.00	Completed		
17	Supplying of 1.1 KV LT UG cable having aluminium condutor PVC insulated shethed, EXTREDED INNER SHEATHRD galvnised steel,strip (2CX 10Sqm.mm wire armoured) confirming IS 3975;1990(no.of strip indicated i GTP) AND extruded PVC outer sheathing armoured cable IS 1554 part 1,1998 and confirming to GTP of group.A.4 Core 16Sqmm.P No.40/ I No.6.4.4 (4 core 16 Sqmm)	m	847.00	Completed		
18	Labour charges for laying of 1.1 K.V class UG cable, in existing trench GI Pipe / stoneware pipe /on wall/on poles as required In existing trencg/duct 6 Sqmm to 16 Sqmm)	Mtr	847.00	Completed		
19	Supplying and fixing of procelin fuse channel with e on existing wooden / panel using necessary nuts, bolts and washers , 63 Amps	Each	29.00	Completed		

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AE-02

Asst Executive Engineer
Yelahanka Sub. Division
(BBMP Ynk. Zn)
Yelahanka, Bangalore

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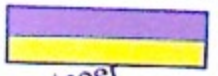
Sl No	Description of Work	Unit	Executed Qty	Stage of Work	May-22	Jun-22
20	Providing and fixing in position 50mm nominal bore non-return valve horizontal type of approved make including cost of all materials, labour and HOM of equipments with all leads complete as per specifications	Nos	29.00	Completed		
21	Supplying and fixing miniature circuit breakers on existing MCB Distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, Energy cross -3 with short circuit breaking capacity of 10K And Completed wiring confirming to IEC 60898 50-63 Amps TPN	Each	29.00	Completed		
22	KSRB 2-2 : Earthwork excavation by manual means for foundation of buildings, water supply and sanitary lines and electrical conduits etc, either in pits or in trenches 1.5m and above in width, in soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications.	Cum	8661.18	Completed		
23	Providing and filling sand in foundation to required depth for sub soil treatment including watering ramming with all lead and lift complete as per specifications.	Cum	1217.61	Completed		
24	Supplying PVC ring tight pipes conformin to IS 4985 :2000 With latest amendments and conveying to work site rolling and lowering into trenches laying true line level and prefect linking at joints testing and commissoning incuding loading and un loading at both destinations and cuts of pipes wherever neccessary including joints of PVC pipes and specificals (excluding cost of pipes)with jointing of approvel type with all labour with all lead and lift incuding encasing the pipe	m	13529.00	Completed		
25	Refilling available earth around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. includingcost of all labour complete as per specifications	Cum	5558.64	Completed		
26	Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications Clause 401 of MORTH V Revision.	Cum	1165.41	Completed		
27	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications	Cum	1523.84	Completed		
28	KSRRB M600-1 Providing and Constructing dry lean cement concrete mix CC 1:5:10 base with OPC 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @0.58cum over a prepared sub-base, coarse and fine aggregate conforming to IS: 383-2016,aggregate cement ratio not to exceed 15:1, Aggregate gradation after blending to be as per Table 600-1,optimum moisture content to be determined during trial length construction.	Cum	443.00	Completed		
29	Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30 over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine aggregate conforming to IS:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2003. mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing	Cum	443.00	Completed		

Executive Engineer
Yelahanka Sub. Division
(BBMP Ynk. Zn.)
Yelahanka, Bangalore

Sl No	Description of Work	Unit	Executed Qty	Stage of Work	May-22	Jun-22
30	Supplying fully automatic star-delta starter unit push button type with suitable wires, 3 contactors, one adjustable thermal timer mounted on a common base plate held in steel enclosure for use on 400/440 volts 3 phase and wired after fixing to the existing wooden board for motor.Above 12.5 HP upto 25 HP	Nos	26.00	Completed		
32	Filling in foundation with granite/trap broken metal 100mm and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with lead up to 50m and lift 1.5m complete as per specifications. a) 40mm Jelly	Cum	32.96	Completed		
33	Filling in foundation with granite/trap broken metal 100mm and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with lead up to 50m and lift 1.5m complete as per specifications. b) 20mm Jelly	Cum	32.96	Completed		
34	Filling in foundation with granite/trap broken metal 100mm and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with lead up to 50m and lift 1.5m complete as per specifications. c) Coarse Sand	Cum	32.96	Completed		
35	Filling in foundation with granite/trap broken metal 100mm and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with lead up to 50m and lift 1.5m complete as per specifications. d) Fine Sand	Cum	32.96	Completed		
36	Filling in foundation with granite/trap broken metal 100mm and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with lead up to 50m and lift 1.5m complete as per specifications. e) 12.5mm chips	Cum	32.96	Completed		
E1	Providing and laying reinforced cement concrete pipe NP2 for culverts including pointing ends, and fixing collars with cement mortar 1:2 including cost of materials, labour, HOM complete as per specifications, curing complete as per specifications. 900mm dia	m	257.50	Completed		
E2	Texmo, Atalanta, Suguna, CRI KIRLOSKER AND other equipment pumps 15.00 HP/11KW(30 Stage)	Unit	1.00	Completed		
E3	KSRB13-9 Providing and fixing to wall, ceiling and floor high density polyethylene pipes 6.00 kgf/sq cm working pressure of outside diameter raising mains & exposed distribution pipes with special flange, compression type fittings, wall clips, making good the wall, ceiling and floor, including cost of all materials, labour charges, HOM and testing complete as per specifications. 40mm dia	m	271.00	Completed		

= Planned %

= Executed %

AE-02

Asst. Executive Engineer
Yelahanka Sub. Division
(BBMP Ynk. Zn)
Yelahanka, Bangalore